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Kernan Announces Energy Grants for Angola's Breeden YMCA

INDIANAPOLIS — An innovative co-generation facility designed to provide electricity and heating will be tested at the Angola YMCA thanks to a \$30,000 grant from the Indiana Department of Commerce's Energy Policy Division.

Lt. Governor Joe Kernan announced today that the Energy Policy Division awarded the Breeden YMCA an Energy Education and Demonstration grant of \$30,000 to install and test a co-generation system that will use two capstone microturbines to generate electricity and supply hot water for the building and its two swimming pools.

"This project is a great example of how partnerships between private and public organizations can result in leading-edge technology projects here in Indiana," said Kernan, who serves as director of Commerce. "By combining water heating with electrical generation, the Angola YMCA will operate in a more energy-efficient manner while also demonstrating a means to improve the reliability of the electrical grid in Indiana."

The Breeden YMCA system employs natural gas-powered capstone microturbines – essentially small jet engines – to produce electricity, thus lowering the amount of electricity the facility needs from the electricity grid and increasing electric power for other customers during periods of high usage.

As with other jet turbines, microturbines normally vent a great deal of heat from their exhaust. In this system, the by-product heat generated by the microturbines will be used to heat water in the YMCA's swimming and therapy pools and to provide hot water throughout the building, thus turning "waste" heat into useful energy. Such systems are often referred to as "combined heat & power" or "co-generation." Whereas the use of fuels such as natural gas and coal to generate electricity typically results in 50% to 70% of the energy content of the fuel being lost as waste heat, co-generation can be more than 70% efficient at converting fuel to useful energy.

In addition to Commerce's Energy Policy Division, the Breeden YMCA is partnering with NiSource Energy Technologies, Tri-State University, National Renewable Energy Laboratory (NREL) through the U.S. Department of Energy (DOE), and the Steuben County REMC to bring this project together.

Breeden YMCA/ add 1

In order to enhance the project's value as an education and demonstration effort, engineering students and professors from Tri-State University in Angola will be involved in data collection, analysis and trouble-shooting. Co-generation projects are, by their nature, much more complex than most forms of distributed generation. Therefore, measuring the energy efficiency gains can be a complex process. Tri-State University will monitor and analyze the performance of the system.

For John Mack, executive director of the Breeden YMCA, the decision to participate in this project was in keeping with the mission of the YMCA. "This is what we're about," Mack said. "This project is about collaboration – it's about bringing people together, and it's about advancing the state."

The Energy Education and Demonstration grant program is administered by the Energy Policy Division and offers grants of up to \$30,000 or 30% of total costs, whichever is less, for projects that demonstrate energy efficiency or renewable energy technologies that are novel to Indiana and that can help to bring education and awareness about energy issues.

For more information about this or any other programs administered by Commerce's Energy Policy Division, contact Ethan Rogers, EPD's Industrial Program Manager, at 317.232.8961 or visit the Web site www.indianacommerce.com.